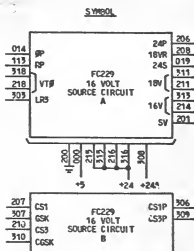


SHEET INDEX		
CONTENTS	SHEET NO.	SHEET ISSUE
SHEET INDEX SUPPORTING INFORMATION CURRENT DRAWN USED ON NOTES SYMBOL RECORD OF CHANGES	1	4
COMPONENT LIST CIRCUIT SCHEMATIC CIRCUIT DESCRIPTION	2	4



RECORD OF CHANGES				
DWG	PREV	NO	DATE	SEE NOTE
155				

NOTES:

- UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MICROFARADS
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.

2. POWER AND GROUND TERMINALS FOR INTEGRATED CIRCUITS:

IC CODE	GRID TERM.	BAT TERM.	
614E			
614F			

3. BATTERY AND GROUND TERMINALS FOR THIS CIRCUIT PACK ARE AS FOLLOWS:

FUNCTION	TERMINAL
+5	000
+24	215
+24	216
+24	219
+24	216
+24A	208
GRD	200

4. CLOSEST RECOMMENDED HORIZONTAL MOUNTING CENTERS IS 0.750 INCH.

5. 1 GROUND RETURN.

6. THE INITIAL USE OF THE FC229 CIRCUIT PACK IS IN 30-2011-01 AND 30-3011-01.

SYSTEM USED ON	DESIGN CONTROL
NO. 2 CS5	3H
NO. 3 ESS	3H

CURRENT DRAWN: 2.4@2000mA

SYMBOL			
16 VOLT SOURCE			
ELEMENT IDENT			
TERM. NO.	FUNC.	TERM.	LOC.
181	#	505	204
182	#	511	204
183	#	515	204
184	#	518	204
185	#	519	204
186	#	524	204
187	#	515	204
188	#	521	204
189	#	511	204
190	#	518	204
191	#	504	204
245	#	509	204
+24	P	519	204
+24	P	515	204
+24	P	515	204
+24	P	516	204
+24	P	502	204
GND	G	500	204
16 VOLT SOURCE			
ELEMENT IDENT			
TERM. NO.	FUNC.	TERM.	LOC.
C53	1	510	202
C54	1	507	202
C55	1	507	202
C56	1	510	202
C57	3	501	202
C58	3	502	202

COMPONENT LIST

CAPACITOR

DESIG CODE

C1	K5-19774 L5, 0.047
C2	K5-19774 L1, 10000p
C3	K5-19774 L5, 0.047
C4	K5-19774 L1, 0.01

DIODE

DESIG CODE

D1	4508
D2	4508
D3	4508
D4	4508

INTEGRATED CIRCUIT

DESIG CODE

IC1	6147/7781BUC
IC2	6147/7781BUC
IC3	6147/7781BUC

RESISTOR

DESIG CODE

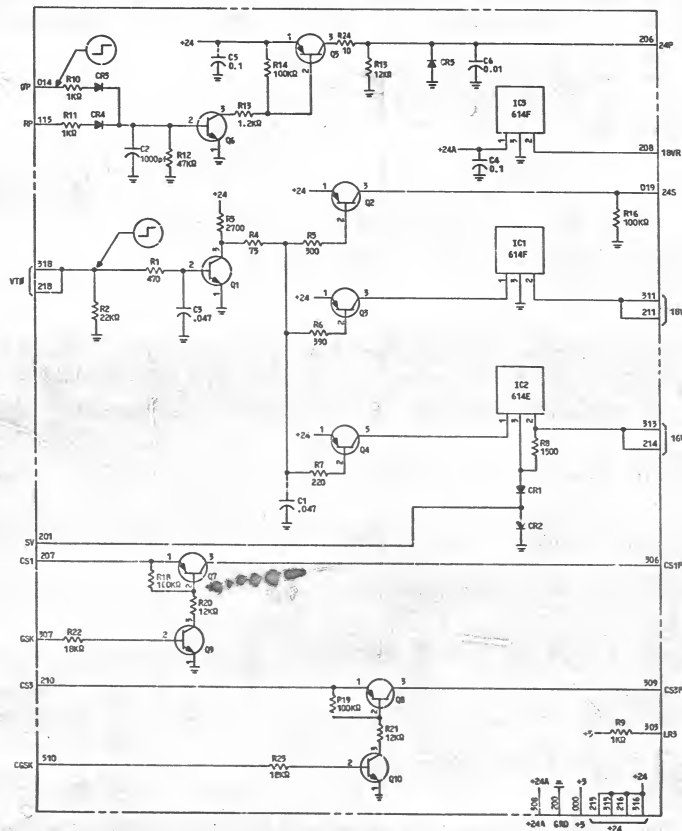
R1	K5-16445 L2, 470
R2	K5-16445 L2, 2200
R3	K5-16445 L2, 2700
R4	K5-19151 L1, 75
R5	K5-19151 L1, 500
R6	K5-19151 L1, 500
R7	K5-19151 L1, 220
R8	K5-16445 L2, 1500
R9	150
R10	150
R11	K5-16445 L2, 4700
R12	K5-19150 L2, 1200
R13	K5-16445 L2, 10000
R14	L1, 1200
R15	L2, 10000
R16	L1, 10000
R17	L1, 1200
R18	L1, 1600
R19	L1, 10

TRANSISTOR

DESIG CODE

Q1	645
Q2	580
Q3	645
Q4	51C
Q5	645
Q6	645
Q7	645
Q8	645
Q9	645
Q10	645

16 VOLT SOURCE CIRCUIT



CIRCUIT DESCRIPTION

FUNCTION

THIS PACK PROVIDES SEVERAL SWITCHED AND REGULATED VOLTAGES FOR THE M0.2 AND M0.3 ESS NETWORK CONTROLLERS.

DETAILED DESCRIPTION

A POSITIVE VOLTAGE GREATER THAN 2.4 VOLTS ON THE BP OR RP TERMINALS WILL CAUSE +24V TO APPEAR ON THE 24P TERMINAL.

REGULATED +16V IS PRESENT AT ALL TIMES ON THE 16VR TERMINAL.

A POSITIVE VOLTAGE GREATER THAN 2.4V ON THE VTB LEADS WILL CAUSE +24V TO APPEAR ON THE 24S TERMINAL, +16V TO APPEAR ON THE 16V TERMINAL, AND +16V TO APPEAR ON THE 16V TERMINAL.

A POSITIVE VOLTAGE GREATER THAN 2.4V ON THE CSK OR CSKP LEADS WILL CAUSE A VOLTAGE CONNECTED ON THE CS1 OR CS2 LEADS TO APPEAR ON THE CS1P OR CS2P LEADS.

LEAD DESIGNATION

NAME	MEANING
BP	OPERATE
RP	RELEASE
VTB	VOLTAGE TURN ON
SV	SET VOLTAGE
CS1	CURRENT SOURCE 1
CSK	GRID SKIP
CS3	CURRENT SOURCE 3
CSKP	CONCENTRATOR GROUP SKIP
24P	24 VOLTS PULSED
16VR	16 VOLTS REGULATED
24S	24 VOLTS SWITCHED
16V	16 VOLTS
16V	16 VOLTS
SV	SET VOLTAGE
CS1P	CURRENT SOURCE 1 POSITIVE
CS2P	CURRENT SOURCE 2 POSITIVE
LR3	LOAD RESISTOR

FC229 CIRCUIT PACK

BELL TELEPHONE LABORATORIES

CPS-FC229
SHEET 2

4A